

COUNTYWIDE TRUNKED RADIO SYSTEM

UPDATE - October, 2002

Seventh system tower site construction progressing

Implementation of the trunked system's seventh tower site to improve system coverage is well underway, with a targeted operational date of November 30, 2002. This site, utilizing a City of Brookfield water tower at 13595 W. Burleigh Road, is intended to resolve coverage issues in portions of Elm Grove and Brookfield. These areas have been identified as critical locations where system performance is below standard expectations. The new site is intended to improve coverage in these trouble spots, and is also projected to provide improved coverage to certain areas of New Berlin, Butler, Menomonee Falls, and other nearby communities.

The equipment building is being constructed offsite and is to be completed by the end of October. Radio equipment manufacture, and site work involving utilities, foundation, T1 data lines, antennas and buried conduits is also being completed. On October 16, permission was granted facilitating FCC licensing of the site. The Brookfield site will not result in any additional costs to participants as it is being fully funded from dollars available within the trunked radio capital budget.



The seventh site equipment shelter under construction in Hartland on October 28, 2002

*The Trunked Radio System Update newsletter is distributed by Waukesha County Radio Services,
2120 Davidson Road, Waukesha, WI 53186
(262) 548-7600 fax (262) 548-7855*

System reliability, coverage affected by user equipment

While no wide-area radio system provides 100% in-building coverage, appropriate user equipment maintenance and accessory selection can greatly improve reliability and coverage. Recent testing by Waukesha County Radio Services, in conjunction with several system members, has brought to light the possibility that user radio condition and accessories may be causing some coverage and reliability problems.

The system performance standard, unanimously adopted by the Trunked Radio Steering Committee and affirmed by the Vendor Evaluation Committee (both comprised of Municipal and County representatives), plus several independent consultants, requires 95% reliability for portable radios operated at the head in medium density buildings throughout 95% of Waukesha County. While objective testing confirms that the infrastructure exceeds this standard on a countywide basis, users need to ensure that their equipment selection and condition permits them to take full advantage of this performance. Below are the expected standards for utilizing the system as specified by the manufacturer and consultants which, if followed, will maximize your radio performance:

- **Portable radios should be operated at head level, or with manufacturer-recommended Public-Safety-type speaker microphones which are equipped with antennas.** Public-Safety speaker-microphones, which transmit from the hip-level portable antenna, result in a fourfold to tenfold reduction in performance and reliability.
- **Batteries should be used only when they are both fully charged, and analyzed (at least on a monthly basis) to ensure that their capacity meets manufacturer's standards (greater than 80% of rated capacity).** Battery capacity and voltage have an enormous impact on radio performance.
- **Portable antennas should be held vertically wherever possible, and microphones should be addressed clearly and directly.** Operating a portable horizontally or inverted, or speaking an excessive distance from the microphone are common practices that have very detrimental effects on radio performance.
- **All mobile antennas should be mounted on the roof (not the trunk) of the vehicle and should be "sweep tested" to ensure integrity and performance.**

You are encouraged to contact the Radio Services staff if you have questions/concerns regarding your coverage and/or the impact on coverage from varying from manufacturer/consultant specifications.